



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,481	07/29/2003	Gerard M. Cuomo	2946	7459

7590 08/11/2006  
Beck & Tysver, P.L.L.C.  
Suite 100  
2900 Thomas Avenue S.  
Minneapolis, MN 55416

EXAMINER

KING, ANITA M

ART UNIT	PAPER NUMBER
----------	--------------

3632

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n N .

10/629,481

Applicant(s)

CUOMO, GERARD M.

Examiner

Anita M. King

Art Unit

3632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This is the sixth office action for application number 10/629,481, Surgical Microscope Apparatus, filed on July 29, 2003.

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 8, 2006 has been entered.

***Claim Objections***

Claim 5 is objected to because of the following informalities: in line 4, "tot" should be --to--; and in line 5, "he" should be --the-- and "said" should be deleted after "third".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "said dental chair" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said variable focus microscope" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the physician" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitations "patient position" and "said hinge" in line 19. There is insufficient antecedent basis for these limitations in the claim.

Claim 6 recites the limitation of "the microscope rotationally attached to the coupler along an axis that is perpendicular to the length of the terminal link...", it is uncertain as to whether the applicant is intending to claim the subcombination of a surgical microscope system or the combination of a surgical microscope system and a microscope. For examination purposes, the subcombination will be examined.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the surgical microscope system and the hand control cited in line 19, since the hand control is a part of the dental chair, and the dental chair is not cited as a element of the claimed invention.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,571,038 to Jako in view of U.S. Patent 5,748,366 to Yasunaga et al., hereinafter Yasunaga, in further view of U.S. Patent 3,357,740 to Vaughn et al, hereinafter, Vaughn, U.S. Patent 790,217 to Mason, and in further view U.S. Patent 2,697,776 to Wale. Jako discloses surgical microscope system comprising: a surgical microscope; a dental chair (16); a substantially vertical microscope support arm (see Fig. 1) adapted for fitment on the dental chair, and thereby resulting in vertical motion in response to chair vertical motion (Col 3, line 16ff); an articulated horizontally movable microscope positioning arm (14) having a plurality of hinged links, each link having a vertical axis for restricting arm motion solely to a horizontal plane, a terminal link (12) with a repositionable axis of rotation orthogonal to the substantially vertical support arm proximate the microscope; a microscope coupler (@10) connecting the microscope to the terminal link, the microscope being rotationally attached to the coupler along an axis that is perpendicular to the length of the terminal link and that lies within a plane which is perpendicular to the ground; and whereby the microscope system is supported for vertical motion and location by the vertical support arm to provide coarse focus for the microscope.

Jako discloses the claimed invention except for the limitation of the microscope being a variable focus surgical microscope. Yasunaga teaches a surgical microscope system comprising a variable focus surgical microscope (4) supported by a vertical support arm (1)

Art Unit: 3632

and a positioning arm having links (2 & 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the microscope in Jako to have been a variable focus surgical microscope as taught by Yasunaga for the purpose of alternative, mechanically equivalent microscope for improving the operability of an operator.

Jako combined with Yasunaga disclose the claimed invention except for the limitation of the dental chair of the type having a hinge for rotating a patient's position, a foot control, and a hand control. Vaughn teaches that it is known in the dental chair art to have a chair including a foot control (51) whereby the dental chair can be raised and lowered and a hand control (29) whereby the patient position can be rotated about a hinge (35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the chair in Jako to have included a chair of the type having a hinge for rotating a patient's position locatable near the patient's hips and both a foot control and a hand control as taught by Vaughn for the purpose of providing a convenience of the dentist to promote his efficiency.

Jako combined with Yasunaga and Vaughn disclose the claimed invention except for the limitation of the positioning arm having four or more hinged links. Mason teaches a movable positioning arm having four or more hinged links (6, 7, 10, and 11), wherein one link (15) has a bore socket (12) for receiving a rod shaped member (15), each link having a vertical axis for restricting arm motion solely to a horizontal plane, the positioning arm connected to a vertical support with a clamp (2, 3) and the clamp allowing adjustable vertical orientation and vertical motion along the length of the vertical support, wherein each link has

an upper surface and a lower surface and wherein the adjacent links are vertically proximal one another, such that upon folding the links together the lower surface of one link is proximal the upper surface of the adjacent link, and wherein the links are arranged in vertical step fashion with a first link proximate the support arm at the lowest vertical position and with a second adjacent link coupled at the top of the first link, and a third link coupled to the top of the second and a fourth link coupled to the top of the third link. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the positioning arm in Jako to have included the positioning arm as taught by Mason for the purpose of providing an increased length of the positioning arm to provide more adjustability to accommodate the user.

Jako combined with Yasunaga, Vaughn, and Mason disclose the claimed invention except for the limitation of terminal link that permits the microscope to be inclined at any of several discreet pre-selected angles with respect to the vertical support arm. Wale teaches a system having a terminal link (10) with a repositionable axis of rotation, and having an opening (12) for receiving a cylindrical member (14) and a pivot pin (22) for insertion into an aperture in a tube (26) whereby a support (40) may be inclined at any of several discreet pre-selected angles with respect to another support (C). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the terminal link in Jako to have included the link as taught by Wale for the purpose of providing an alternative, mechanically equivalent means for adjusting an object such as a microscope in a variety of positions in relation to a support system.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In regards to applicant's assertion that the system has been successfully selling is insufficient, there is no showing that others of ordinary skill in the art were working on the problem and if so, for how long. In addition, there is no evidence that if persons skilled in the art who were presumably working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem. See MPEP § 716.04.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 743,270 to Golcher


U.S. Patent 6,729,592 to Kurtts



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita M. King whose telephone number is (571) 272-6817. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Friedman can be reached on (571) 272-6842. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Anita M. King  
Primary Examiner  
Art Unit 3632

August 7, 2006